

## **REMARKS**

### **I. Introduction**

Claims 11 to 15 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

### **II. Rejection of Claims 11 to 15 Under 35 U.S.C. § 103(a)**

Claims 11 to 15 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 5,271,821 ("Ogasawara et al.") and U.S. Patent No. 4,296,148 ("Frieze"). It is respectfully submitted that the combination of Ogasawara et al. and Frieze do not render unpatentable the present claims for at least the following reasons.

Claim 11, as amended, relates to a measuring sensor for determining a physical property of a measured gas, including, a sensor element capable of being exposed to the measured gas, the sensor element includes a ceramic element made of solid electrolyte layers, an outer electrode situated on a surface of the ceramic element, and a porous protective lining coating the outer electrode, and a protective layer at least partially coating the sensor element, the protective layer protecting against a harmful component in the measured gas, the protective layer covering the porous protective lining, wherein the protective layer includes one of highly active  $\gamma$ -aluminum oxide ( $\text{Al}_2\text{O}_3$ ) and highly active  $\delta$ -aluminum oxide ( $\text{Al}_2\text{O}_3$ ), the aluminum oxides having additives of one of the alkaline metals group, the alkaline earth group, the IV B subgroup, and the lanthanides group, wherein a material of the protective lining includes zirconium oxide ( $\text{ZrO}_2$ ) having a small proportion of aluminum oxide ( $\text{Al}_2\text{O}_3$ ) and *wherein the protective layer has a substantially higher proportion of aluminum oxide than the protective lining*. Support for this amendment may be found, for example, on page 3, lines 15 to 18, of the Specification.

Neither Ogasawara et al. nor Frieze discloses, or even suggests, the feature that *a protective layer has a substantially higher proportion of aluminum oxide than a protective lining*. While Ogasawara et al. may disclose two protective layers containing aluminum oxide or alternatively zirconium oxide, nowhere do Ogasawara et al. disclose, or even suggest, the individual selection of the make-up of each of the two layers as in the present claim, i.e. both the material of the

protective layer (aluminum oxide) and the material of the solid electrolyte of the sensor element (zirconium oxide), and the relative proportions of the make-up of the materials of each layer. Having this make-up and proportion of the materials of the two layers results in the technical effect that a contamination of the sensor element is prevented by the protective layer, and a stable adhering of the protective layer to the sensor element is guaranteed by the fact that the protective lining contains zirconium oxide and aluminum oxide.

Friese discloses a method of applying multiple layers, including an electrode layer, to solid electrolyte body. The layers include a cover layer and a porous ceramic protective layer. Nowhere does Friese disclose, or even suggest, the feature that a protective layer has a substantially higher proportion of aluminum oxide than a cover layer (*i.e.* protective lining).

As such, it is respectfully submitted that the combination of Ogasawara et al. and Friese does not render unpatentable claim 11.

As for claims 12 to 15 which depend from claim 11 and therefore include all of the features included in claim 11, it is respectfully submitted that the combination of Ogasawara et al. and Friese does not render unpatentable these dependent claims for at least the same reasons more fully set forth above.

In view of all the foregoing, withdrawal of this rejection is respectfully requested.

### III. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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